

Far Away, So Close: Preservices School Library Media Specialists' Perceptions of AASL's Standards for the 21st-Century Learner

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Preservice school library media specialists will implement the AASL Standards for the 21st Century Learner in their new roles. Drafted in 2007, the Standards reflect principles which school library media specialist must impart to learners to prepare them to be knowledge consumers, producers, and communicators in global environments. Because many new school library media specialists are currently classroom teachers, they have experiences with curriculum and professional standards that may influence their perceptions of school library media standards. In this study, the researchers convened focus groups of Master's in Library Studies students in an attempt to capture their perceptions and to determine their likelihood to support and implement new information-centered approaches to student learning. The results of the study suggested that preservice school library media specialists are eager to employ the freedom and creativity embodied in the Standards to foster learning experiences in which students can use their digital acumen to construct and express knowledge.

Introduction

Students in our schools today are citizens of the twenty-first century, and they are living and learning in the midst of an unprecedented knowledge explosion. Because schools and teachers cannot teach everything the students will need to know, and because students can easily become overwhelmed by the unending availability of information, standards have been devised in a number of curriculum areas to guide teaching and learning. School libraries are places in which students learn to link classroom content together and to the world at large.

The American Association of School Librarians (AASL) unveiled its new *Standards for the 21st-Century Learner* at the 2007 ALA Annual Conference in Reno, Nevada. These standards are the culmination of almost a year of work scanning trends in information-rich learning, technology in schools, and children's changing ways of interacting with the world.

In an effort to guide the development of students' knowledge bases, the school library profession has developed standards that will

- o serve as a framework for K–12 school library program design through the use of thematic strands;
- o provide detail about the skills, dispositions, and responsibilities fundamental to rich resource-based learning; and
- o serve as a guide for curriculum decisions by providing assessment strategies regarding knowledge, processes, and attitudes essential for all students.

The *Standards for the 21st-Century Learner* are the framework for this study. It begins with a delineation of common beliefs to set a shared philosophical perspective on the standards. The common beliefs do not refer to beliefs within the library profession, but rather beliefs common to all educators. They focus on reading and inquiry as the foundation for learning, and go on to articulate the role of ethics, equity, technology, and information literacy (IL) in education. The last common belief notes that "school libraries are essential to the development of learning skills" (AASL 2007, 3).

Following the statement of common beliefs, the standards include a thematic overview, stating that learners use IL skills, resources, and tools to

- o inquire, think critically, and gain knowledge;
- o draw conclusions, make informed decisions, apply knowledge to new situations, and create new knowledge;
- share knowledge and participate ethically and productively as members of our democratic society; and
- o pursue personal and aesthetic growth.

Finally, each standard is explicated into four implementation areas: skills, dispositions in action, responsibilities, and self-assessment strategies. These standards are not a curriculum guide, but are a broad set of standards for what students need to know and be able to do, the ethical and legal responsibilities that go with these skills, the motivations that students must have to implement the skills in the context of the identified responsibilities, and strategies for assessing their personal information use.

Standards are, of course, only useful if they are implemented. The purpose of this exploratory study is to investigate preservice school library media specialists' (SLMSs') initial perceptions of the new standards and their plans for introducing them into their own practice.

Literature Review

Standards for learning in school libraries are products of the larger standards movement in the United States. The education-standards movement gained momentum with the Clinton administration's Goals 2000 education plan, and that momentum continues today with state-level standards prompted by the No Child Left Behind Act of 2001, which provides an imperative for K–12 curriculum development.

Standards-based reform is by far the biggest deal in American K–12 education today, and it has been at least since the nation's governors met with President George H. W. Bush in Charlottesville, Virginia, in 1989 to set national education goals (Finn, Petrilli, and Julian 2006, 8).

The myriad standards documents represent the efforts of key representatives of curriculum areas to communicate the content and skills necessary for student mastery. Standards are often written in the format of what students should "know" (content) and "be able to do" (understand and apply) in particular grades. Standards began in five core curriculum areas—history, science, math, English, and geography—but some states later added other disciplines like government (civics), economics, and technology.

The Effect of Curriculum Standards Efforts

Standards implementation efforts have been fraught with complication. Approximately ten years after the beginning of the U.S. Department of Education standards movement, the implementation process has been uneven at best. The Fordham Foundation's *State of State Standards* report (Finn and Petrilli 2000) analyzed and graded the extent to which national standards had made their way into state curriculum frameworks. For the five core subject areas, most states fared poorly and received failing grades. The Fordham Foundation's second state standards survey (Finn, Petrilli, and Julian 2006) reported that though most states had revised or replaced their standards in many subjects, academic standards were no better in content or execution in 2006 than they were in 2000. The average grade that states earned from Fordham was as low as in 2000. More tellingly, student achievement has only improved slightly, with modest gains recognized in reading, science, and mathematics. The U.S. Department of Education is unable to establish a relationship between state standards and student achievement on standardized tests like the National Assessment of Education Progress (NAEP) (NCES 2007).

The weak effect of curriculum standards suggests that design and implementation processes faced many challenges. The attempt to fit the national standards into the existing educational system has been plagued by problems stemming from competing economic, social, political, and institutional pressures on school administrators, teachers, and parents. The *State of State Standards* surveys included analyses of the barriers to standards implementation. In many instances, education officials reported feeling that standards were seen as a federal attempt to control the curriculum in schools at the local level. Moreover, educators reported that a standardized emphasis on curriculum content does not fit well with the constructivist learning environments promoted by national

organizations such as National Council of Teachers of Mathematics (NCTM), National Science Teachers Association (NSTA), and the National Council of Teachers of English (NCTE). Indeed, Barnes' 2002 survey of fourth- and eighth-grade teachers in all core curriculum areas found that the majority relied upon on student-directed learning rather than teacher-directed learning. Another finding of this survey was that very few teachers believed that the educator's core responsibility is to teach students specific information and skills. The teachers in Barnes' survey stated that the purpose of schooling is to help children learn how to learn. These perceptions on behalf of administrators and teachers have undoubtedly frustrated the practical application of curriculum standards in schools.

Beyond that, there is the sheer volume of curriculum material contained in the many standards. Through committee-based standards authorship, each discipline codified what should be learned, and in many instances, group compromises resulted in material unrealistic to implement given the length of the school day and year, the availability of qualified teachers, and already existing graduation requirements. Add local politics and a lack of articulation between states and local school districts, and successful implementation has been blocked from many directions.

Jacobs (quoted in Finn, Julian, and Petrilli 2006) noted that three states (Massachusetts, California, and Indiana) successfully implemented curriculum frameworks because the states supported the standards implementation with funding for local districts, sent standards documents out for review to external organizations such as companies and higher education institutions, and honored a single ideological orientation in each curriculum area. The standards that emerged from these states were clear, jargon-free, and reflected a strong and coherent commitment to learning in each curriculum area.

The Effect of Information Literacy Standards Efforts

The same sorts of challenges and successes have affected the development and implementation of school library standards. The school library field has always been a standards-driven profession, beginning with the report of the Charles C. Certain Committee in 1920 and continuing through the *Information Literacy Standards for Student Learning* (AASL and AECT 1998). Unlike curriculum-based standards movements, however, the success of school library standards and IL standards has relied on the cultivation of buy-in from a range of disciplines and stakeholders within the school (Moore 2002).

The lack of a specific implementation strategy has frustrated the execute of the current IL standards articulated in the 1998 *Standards for Student Learning*. Where the standards are implemented in an environment where the school administration gives them priority, where the SLMS is able to work closely with teachers, and where teachers receive professional development to understand how the standards interweave with and support the curriculum, implementation tends to be successful (Latrobe and Masters 2001).

Work done in New Zealand by Probert (2006) suggested that there is a subtler barrier to the widespread implementation of IL standards. Teacher participants in that study did not

understand the concept of IL and thought of it as computer literacy or media literacy. This confusion led teachers to feel that IL was something distinct from classroom content that belonged in unrelated "skills" classes in the library. Probert's findings, supported by those of an earlier study by Clyde (2005) that suggest that IL standards implementations are complicated by the unique issues of a lack of understanding and a need to establish base school-administrator and educator support.

Research Base of New Standards

The *Standards for the 21st-Century Learner* are too new to have a strong implementation research base or even many practical examples of use. Still, one hopes that lessons outlined above will be learned from prior implementations of curriculum and school-library standards. A search of the practitioner literature revealed articles written as overviews or introductions to the standards (e.g., Formanack 2008; Johns 2008; Marcoux 2008). Articles providing examples of implementation have yet to be written. Until this greater understanding is achieved through practice, it is important to understand the research base underpinning the development and articulation of the new standards.

Each of the four standards reflects recent important U.S. and international studies of education and library science. This broad approach reflects the widespread research support for the new standards' potential to prepare students to be global citizens.

Standard 1. Learners will use skills, resources, and tools to inquire, think critically, and gain knowledge.

In the library, students can link their classroom learning to their current knowledge. This link can be made through questioning, using multiple sources to synthesize disparate opinions, and applying information in ways that are not only ethical but also easily communicated to others for feedback.

In England, Parker and Hurry (2007) found that elementary students' comprehension improved when their teachers modeled, rather than led, questioning activities related to reading assignments. Students were able to work more effectively in small groups and make positive gains in their reading achievement when they saw how to ask questions about a text and learned what types of questions to ask. This research was confirmed by a study of American students with learning disabilities (LD) in a Washington high school (Lenz et al. 2007). Due to large class sizes, teachers lacked the ability to work with LD students in a one-on-one format, but when teachers modeled strategies such as guiding questions and concept mapping, LD students applied these approaches, used peer coaching, and increased their comprehension of informational texts as demonstrated on the state-mandated reading test.

For children to be successful, productive students and citizens, core curriculum alone is not sufficient. Indeed, a study of the change in teacher tasks in the United States conducted by When Valli and Bueses (2007) studied changes in teacher tasks that resulted pressures to meet the annual yearly progress goals mandated by No Child Left

Behind, they found that teachers had narrowed the classroom curriculum and decreased spontaneous, technology-rich, creative learning activities. In the school library, students have opportunities to connect learning in different areas and build their abilities to express themselves and pursue their interests.

Standard 2. Learners will use skills, resources, and tools to draw conclusions, make informed decisions, apply knowledge to new situations, and create new knowledge.

Students need to organize and apply information in ways that allow them to productively collaborate. Students should use a range of sources and resource types link their conclusions to the phenomena in the world and to develop directions for future exploration.

Researchers (Lohnes 2007; Wilber 2007), used observations and interviews to examine the information-related skills of first year students at two U.S. universities. In both studies, the researchers concluded that students predominantly applied self-generated approaches rather than traditional information-seeking and organization skills. Study participants cited the incompatibility of approaches they had been taught in their K-12 schooling with their highly technology-rich, almost entirely Web-based interaction with information. Even at the elementary-level level, a quasi-experimental study conducted in Michigan showed that LD students benefited far more from the scaffolding provided by self-selected Web-based tools with their writing and organization skills than the traditional methods they had been taught in the classroom. These students also requested access to computers outside the classroom, elsewhere in the school, to pursue their learning in undistracted, self-directed ways (Englebert et al. 2007).

Zuljan (2007) led a team of researchers in Slovenia to investigate the relationship between educators' teaching philosophy and students' to abilities to work independently and draw wide-ranging conclusions based on the information they found. Interestingly, the study found that it was not just the teachers' facilitation of independent learning but also their espoused beliefs in the importance of student-centered learning that helped students to feel more confident independent work, more able to draw links between their class work and the world, and more likely to exhibit these traits in other classes.

Standard 3. Learners will use skills, resources, and tools to share knowledge and participate ethically and productively as members of our democratic society.

All student activities in school should contribute to building their abilities to participate in the local community and to gain knowledge of global issues. Students who have met the third standard exercise informed decision-making and respect diverse perspectives in their work with others.

The growing population of English Language Learner (ELL) students in U.S schools is a tremendous opportunity for school librarians to help all children make closer connections with one another and multiple cultures. While previous research has shown that most ELL students at excel in activities in which they can express their knowledge through

depiction or demonstration (Lee 2005), recent studies have suggested that elementary school-aged ELL students improved their reading and writing skills when they worked with native English-speaking children in small groups. These studies also suggested that native English-speaking children likewise benefited from working in small groups because they reciprocated peer coaching with learning language and culture from ELL students (Calhoon et al. 2007; Kamps et al. 2007).

Authentic problem-based learning ensures success in all curriculum areas. AP calculus students in a Nevada high school constructed and solved equations better when the mathematics problems related to real-world problems (Perrin 2007). Sustained student involvement in community-based issues also most effectively stemmed from self-initiated activities that reflected personal interests and values. Pike (2007) metasynthesized citizenship education literature from a number of countries and found that that students were empowered in their communities and to became involved in social issues when they were encouraged to pursue self-directed, cross-curricular themes in informal learning environments like school libraries. These students were also likely to demonstrate "invisible citizenship" through creative expression and peer-to-peer communication.

Standard 4. Learners use skills, resources, and tools to pursue personal and aesthetic growth.

School librarians inspire students to read for pleasure and develop their personal interests; standard four embraces leisure pursuits as worthwhile complements to school work and support student learning. Students can share their enthusiasm with others through a variety of media.

Konings' (2007) research team in the Netherlands surveyed tenth-grade students and teachers about their desired learning environments. Educators' perceptions of what learning environments should be like contained vastly different than students' preferences. The researchers concluded that when students had input into the design of their environments, they felt more successful and invested in their learning Similarly, when a first-year high school teacher in Greece asked students to list factors that would make them more successful in learning ancient Greek, the students did not ask for more time to complete assignments and similar supports. Students stated that their learning would be best furthered in an environment that they designed and in which they could pursue their personal interests in addition to their schoolwork (Mitsoni 2006).

AASL's new *Standards*, while informed by recent research worldwide, are the byproduct of an educational movement that has, at times, been riddled with controversy and fraught with a variety of implementation barriers. To understand the points at which the implementation of these standards might be derailed, we sought to gather initial perceptions of SLMSs toward embracing new guides for their work.

Methods

Research Questions

The research questions that guided the focus group discussions stem from preservice SLMSs' perceptions of the new *Standards for the 21st-Century Learner*:

- 8. What do preservice SLMSs see as the major differences between the *Standards* for the 21st-Century Learner and the IL standards contained in the *Information* Literacy Standards for Student Learning?
- 9. What aspects of the new standards do preservice SLMSs feel are most important to emphasize with students? Why?
- 10. What barriers during the implementation of these standards are anticipated? What are some ways professionals can plan to address those problems?
- 11. In what ways should preservice education experiences prepare preservice SLMSs to fosters principles embodied the standards?

Participants

We drew participants from two sections of the Management of the School Library Media Center course at an urban university in Michigan in the fall 2007 and winter 2008 semesters. Each section included nine participants (eight women and one man) for a total of sixteen women and two men. All participants were white, between twenty-five and fifty years of age, and had taught at least one year in K–12 classrooms in suburban or urban school districts.

Data Collection

This study used focus groups conducted during the course of one class meeting per semester. The participants were given five questions related to the research questions and asked to discuss them in groups of three. Then the groups convened and debriefed together, and we recorded the debriefing sessions.

The focus group technique was selected because, for SLMS, focus groups not only offer researchers a chance to gather important data about practice-related issues, they also offer these oft-forgotten personnel opportunities for empowerment through gendered discussion, enhanced professional networks, and strategies to improve their effectiveness.

Focus groups offer reflective learning and strengthening of communities of practice. As in other school settings, the structure of schools often isolates teachers from each other and discourages informal learning between educators within schools. This is even more an issue with SLMSs, which are often unique within their sites and do not have regular interaction with other school library professionals. Participants find the focus group environment a welcome event for professional dialogue and in-depth reflection, resulting in both a sense of shared circumstance and the opportunity to learn successful strategies for the school library that have immediate relevance (Mardis and Hoffman 2007).

Data Analysis

Creswell (2003) contends that qualitative data collection and data analysis must be a simultaneous process in qualitative research. Hitchcock and Hughes (1995) claim that qualitative analysis "involves discovering and deriving patterns in the data, looking for general orientations in the data, trying to sort out what the data are about, why and what kinds of things might be said about them" (p.295). Typically, throughout the data-analysis process, researchers code data using an iterative process (Creswell 2004). During data analysis for this study, we organized the data by research question, then categorized them, reviewed them repeatedly, and continually coded them. The major list of ideas that surfaced are chronicled, as suggested by Merriam (1998), in the results section of this paper.

We analyzed the results of the focus groups by performing audio analysis to identify patterns in participant responses. The first step of the data analysis was to explore the data. During the analysis, data were thematically coded for each focus group question. We divided each of the participants' responses into segments and labeled the segments with category labels, or codes. When the coding of individual responses was completed, we reviewed the codes for overlap and condensed the overlapping codes into overarching themes.

Limitations To and Caveats Regarding this Study

Subsequent to this study, AASL released *Standards for the 21st-Century in Action* (2009), which may give practitioners support in implementing the *Standards for the 21st-Century Learner*. However, the intent of this study was not to explore whether the standards were being implemented, or how. Rather, we sought to gather the perceptions of new SLMSs toward standards in general and about the implementation of the Standards in particular. As pointed out in the literature review, standards implementations can be frustrated by a lack of educator buy-in, and educator buy-in is often based on initial perceptions rather than a thorough review and handling of standards.

Results

Standards for the 21st-Century Learner was released in October 2007, and data collection began late in December 2007. We facilitated lively focus groups with engaging conversation about the new standards.

In small groups, discussions between preservice SLMSs focused on the differences between the *Information Literacy Standards for Student Learning* and the new *Standards for the 21st-Century Learner*; aspects of the new standards that were particularly important; potential barriers to implementing the new standards; and what preservice education could do to prepare new professionals to implement the new standards.

Communication with Teachers and Administrators

Participants were initially struck by the difference between the two sets of standards. Sara felt that new standards better reflected how she saw herself in the media specialist role:

When I would look at these [old standards] before, they just kind of seemed confusing and out there. When I look at the new ones, I just think, yes, that's what I do.

Emily echoed that sentiment and welcomed the content and format of the new standards because it would help her better in the school atmosphere:

It seemed like the way that they are setup is similar to the benchmarks and standards that the state has set up. So it seems like since we have to work with those, and we have to work with this, that a similar format works better than trying to figure out how to map them together.

Kellie agreed by pointing out that the new standards were "less librarian-ese," and Mike expanded on that observation:

I think it would make more sense if you're trying to talk to an administrator, too, because it's set up the way the state standards are set up. When we would speak in the old terms, it wouldn't sound as thorough and professional... these are more clearly defined skills and it's easier for the "powers that be" to grasp.

In addition to seeing the new standards as excellent leverage for conversations with teachers and students, the preservice SLMSs felt that the new standards would usher in a new approach to the way they would interact with students.

Important Aspects to Emphasize with Students

The new standards' content reminded Mike of principles he had taken away from his educational foundations classes years earlier:

I remember that there are kinesthetic, cognitive, and affective domains, and it seems like these standards incorporate more of the affective domain than the old ones did. Focusing on attitudes, perseverance and whatnot, will stimulate more student learning.

Kellie reinforced Mike's point by discussing the shift that could occur in the ways in which and with whom SLMSs communicate:

The language alone puts responsibility on the learner instead of on the teacher or the facilitator of information. And I really think that a lot of the improvement is in the simple language, so instead of my always having to tell teachers, "this is how you get information across to a student," I can say to students, "OK, here are the things you need to know before you leave here." It's shifted the audience.

She expanded on this thought:

AASL has said there's a technology piece, a reading piece, and a presentation piece to learning and to me, that's what it has to be about. The rate of information just keeps increasing, and if you don't have all of those pieces in place, then you're going to be left behind. It's a teacher's job and a media specialist's job to bring in every aspect available to help those learners accomplish what they need to accomplish in a way that works for them. If you really want the learner to come away with more possibilities, then you have to help them develop less-developed areas. Those connections between the silos, that's where we come in.

Emily agreed that the new standards would change the ways in which school libraries can help students learn:

[The new standards] hold the students responsible for taking an active part in knowing what's going on, and there's a reason why they have to know it. Activating prior knowledge becomes part of the accountability scheme, and you're able to say to kids, "See you already know this. Let's build on it."

Lisa saw the importance of the standards in a slightly different vein:

I was thinking about these standards from an equity standpoint. The AASL standards seem to accommodate different economic levels. The NETS assume a lot of technology available to all and maybe that's true in school, but kids are away from us three months a year. . . . I teach in an exclusive school district, but we still have kids with no access.

The discussion then turned to the examination of specific standards, and standard 3 particularly resonated with the participants. In Emily's words,

With the new standard 3 that deals with the democratic society, I think of the fact that the media center has so many different resources from so many different areas, so it helps them be aware that it's not just me and the other thirty kids in my class. It helps them realize that Facebook and MySpace are part of a much larger social thing. They have to understand that just because they found it, that doesn't mean it's appropriate for the situation. . . . They really need to understand what's going on around them and who their audience is. . . . It's not just information consumption we should concern ourselves with but also we have a role to teach responsible information transmission. Kids need to be aware that counselors are checking Facebook and MySpace to see what kinds of information they choose to put out about themselves. The new standards are more eye-opening and help kids recognize that what's going on at school really is integrated with the rest of their life.

Kellie strongly agreed and added, "So many kids don't realize that when you use Web 2.0 tools, billions of people can look at what you do. They think . . . that the only people who are going to see it are their friends down the street." As the conversation continued, the topic of responsible information seeking arose, and many students mentioned the

difficulty they saw in encouraging kids to look beyond popular websites and search engines. Kellie saw a way in which the new standards could effect this challenge:

We have to teach kids that tools like Wikipedia can be good places to start, to get some keywords and some basic concepts they can build on in their research. . . . In elementary schools, kids are struggling to read, they need to know how to narrow their searches. If you give kids the skills to use the tools, you don't have to ban things; they understand why they're bad.

In general, the group expressed enthusiasm over a standards structure that, as Sarah said, "seem like they're written more to how kids learn today. The old standards seemed so sterile. Kids do things so differently than we did even ten years ago."

Barriers to Standards Implementation

The discussion of barriers to implementation was brief and not overwhelmingly negative. Participants were optimistic about their abilities to promote the new standards in schools, despite first impressions they may make. Mike said, "From a teachers' standpoint, this document is huge. Teachers will freak thinking they can't possibly cover more. They don't see that I think most good lesson plans already cover a lot of what these standards are covering."

Kellie agreed, "They don't want one more thing on their plate. We can show teachers that they're multitasking in the library . . . and show how these standards mesh with what teachers are already doing."

Technology as a Key Part of Preparation

The desire to know more about technology as part of promoting the new standards was strong across all participants. As Lisa pointed out,

One thing that happens when you step into a school setting is that you find out how much you do not know about technology. We need time in this program to just sit and experience different kids of technology. We need a new "AV geek" course because we often don't have a lot of voice in the kind of technology we have and we get. The technology keeps getting more and more complicated and if teachers have to learn that on top of everything else, they'll just fall behind. We're the conduits between the technology and teachers and we need to help them understand how they can teach standards with it.

The participants felt that the universities should work collaboratively with school districts to have field trips to help students become more familiar with the technology they are likely to encounter.

As the conversation progressed, the successful operation of technology emerged as an initial piece of being able to perform all of the roles requisite of a SLMS. As Sarah said,

"If we don't know how to use technology, we waste time trying to figure it out and that takes away from the time we can be spending with teachers." Lisa agreed: "We need to know how to solve problems quickly, in like five minutes. Some people will just get overwhelmed and freak out. We need to know where to start, who to go to."

Now at the end of his preservice education, Mike had strong feelings about the relationship between his coursework and the new standards:

The classes with hands-on practice with developing items you can use in your media center were the most useful. School media specialists need an alternate path through the program and learn about stuff we need to use in schools. We should have to take more technology classes because they get to the heart of the AASL standards.

The participants were less concerned about issues relating to reading because they felt like they had good foundations in readers' advisory and children's and young adult literature.

Conclusions

The *Standards for the 21st-Century Learner* resulted from a year of discussion, reading, community input, and forecasting. It represents a fresh look at what students should know and be able to do with their SLMSs and school library media programs; these standards are flexible enough to adapt to local situations yet forward-thinking enough to support students for years to come.

The participants' discussions yielded important insight into the implementation, especially in light of the extant literature on standards frameworks.

Research Question 1: What do preservice SLMSs see as the major differences between the *Standards for the 21st-Century Learner* and the *Information Literacy Standards for the Student Learner*?

Prior work on standards suggests that standards tended to be the results of committee work that failed to advocate a clear approach to subject matter. Lack of clear language, overwhelming content, and poor integration with existing school-based practices were commonly cited factors for the failure of standards to achieve widespread adoption and adherence (Finn, Petrilli, and Julian 2006; Finn and Petrilli 2000; Moore 2002).

Previous efforts to implement the existing *Information Literacy Standards for the Student Learner* were dependent upon the cultivation of broad-based buy-in, often accompanied with professional development in the definition and importance of IL skills.

The preservice SLMSs found the *Standards for the 21st-Century Learner* to be empowering and reflective of the new ways of learning that an increasingly information-

rich environment provides. The SLMSs felt that the language of the new standards and their focus on learner responsibility would present a mindset that would appeal to administrators, teachers, parents, and students. Moreover, participants favored the structure of the new standards as being important to easy integration with existing state and local standards frameworks. No participants sensed that the standards reflected a dilution of perspectives on key information skills for students.

Research Question 2. What aspects of the new standards do preservice SLMSs feel are most important to emphasize with students? Why?

The research base of the new standards suggests that student-directed, differentiated learning is an important aspect of all students' engagement. We found mandated core curriculum to be insufficient for students' preparation for further education and work (Valli and Bueses 2007). Given the increasing diversity of learning challenged in classrooms (e.g., language, learning disabilities), it is essential that students have core principles of information use that can be tailored to particular needs (Lohnes 2007).

Research in this area suggests that students desired to control their own information spaces (Konings et al. 2007) and understand how what they learned at school connects to their lives outside of school (Wilber 2007).

It was in shifting the direction and control of learning to students that the participants found the most excitement about the new standards. In myriad examples of the misuse of Web 2.0 technologies and communication styles, participants raised the immediate need for students to take control of their learning through understanding information and technology, not through being banned from or permitted to engage in information activities.

Research Question 3. What barriers to the implementation of these standards are anticipated? What are some ways professionals can plan to address those problems?

The barriers to standards implementations are vast. For core curriculum, past efforts have been complicated by a variety of local and disciplinary factors. For the old standards, efforts have been undermined by a lack of understanding, common vocabulary, and broad-based buy-in.

The preservice SLMSs felt that the new standards could easily be coordinated with classroom activities and goals. Many participants felt that successful implementation was a matter of showing teachers how their existing efforts already supported the standards. Moreover, participants felt that the understandable language and format of the standards allowed rapid adoption and support

Research Question 4. In what ways should preservice education experiences prepare preservice SLMSs to fosters principles embodied the standards?

The new standards' research base indicates that adoption is a matter of perspective, not content. That is, successful implementers of the standards should hone their abilities to facilitate learner-centered, interdisciplinary atmospheres that reflect student interests in school and personal topics. Students desired that these spaces help them connect their schoolwork to real life and fostered use of technologies most familiar to them (Konings et al. 2007; Mitsoni 2006).

Preservice SLMSs pointed to mastery of technology and associated troubleshooting skills as an essential part of their preparation. They were not concerned with their ability to show others how to operate the technology effectively, but the amount of time solving technology-related problems took away from their time to work with teachers and students.

The *Standards for the 21st-Century Learner*, discussed in this paper, will soon be augmented with more opportunities for implementation, reflecting an approach to student learning that occurs both within and beyond the walls of the school library. The literature surrounding the implementation of classroom curriculum standards usually contains case studies, practitioner implementation strategies, national implementation models, and state- and district-level curriculum guides. At this writing, the school library field is bereft of these guides. Further research should focus on the effectiveness of implementation scaffolds that reflect the unique nature of school systems. Because the participants in this study will be part of the generation of SLMSs tasked with effectively implementing the new standards, their perceptions yield important insight into how the future of these standards might be realized.

To foster students that are prepared to fully engage in an information-rich environment in all schools, SLMSs can use the new *Standards for the 21st-Century Learner* to guide their professional decisions. Standards, however, are implemented in complex cultural and environmental contexts; ignorance of these challenges can often undermine the effectiveness of professional efforts. This exploratory study probed the attitudes of new SLMSs and set an agenda for further research to enhance implementation, professional excellence, and student achievement.

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